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(028248-1803)

REMARKS

In accordance with the present invention, there are provided novel cycloaliphatic epoxy compounds and thermosetting resins prepared therefrom. Invention compounds provide resins with desirable characteristics such as, for example, hydrophobicity, high Tg values, ionic purity, hydrolytic stability, and the like. Invention compounds are based on polycyclic hydrocarbon backbones comprising oligomers of the inexpensive and readily available monomer cyclopentadiene. The oligomers are easily synthesized via Diels-Alder chemistry. Thus, invention compounds also provide economic benefit in addition to their exceptional performance characteristics.

By the present communication, the specification has been amended to correct minor typographical errors in the structure depicted in paragraph 53. One skilled in the art would readily recognize that $(C)_{0,1}$ in the structure is a shorthand representation of $(CH_2)_{0,1}$. Thus, no new matter is introduced by this amendment as the amended structure is fully supported by the original specification. In addition, Claims 8, 10 and 11 have been amended and Claims 23-34 are added to define Applicants' invention with greater particularity. No new matter is introduced as the amended claim language is fully supported by the specification and original claims. Claim 4 was withdrawn by the Examiner in the Office Action as drawn to non-elected subject matter. Upon entry of the present amendment, Claims 4, 8-13, and 23-34 will be pending.

The restriction of Claims 4 and 8-13 under 35 U.S.C. § 121 as allegedly being drawn to more than a single invention is respectfully traversed. Applicants respectfully submit that Claims 4 and 8-13 could readily be processed in the same application since all the claims are drawn to polycyclic epoxies. Indeed, a search of Claims 8-13 would of necessity involve a search of Claim 4. Thus, no conservation of PTO resources is realized by maintaining the restriction

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requirement. Accordingly, reconsideration and withdrawal of the restriction requirement are respectfully requested.

Pursuant to the telephone conversation on February 19, 2003, between Applicants' representative and the Examiner, in order to be fully responsive Applicants hereby affirm the provisional election of compound XX for search purposes only. Pending Claims 4, 8-13, and 23-34 are all generic. New Claims 23-28 read on elected species, XX.

The rejection of Claims 10 and 11 under 35 U.S.C. § 112, second paragraph, as allegedly being indefinite for allegedly failing to particularly point out and distinctly claim that which Applicants regard as the invention, is respectfully traversed. By the present communication, Claims 10 and 11 have been amended to correct minor typographical errors. Claim 10 has been amended consistent with the disclosure presented at page 11, lines 1-11 of the application. Likewise, Claim 11 has been amended to correct the typographical error in the structure. Applicants respectfully submit that the claims are clear as written and request that this ground of rejection be withdrawn.

The rejections of Claims 8-10, 12, and 13 under 35 U.S.C. § 102(b) as allegedly being anticipated by or, in the alternative, under § 103(a) as allegedly being obvious over Crivello (Macromolecules, 1996, 29, 433-38) or LeCamp (Eur. Polym. J., 1997, 33, 1453-62) are respectfully traversed. The Office Action alleges that Crivello and LeCamp show siloxanes having formula XVIII. By the present communication, Claim 8 has been amended to delete formula XVIII. Applicants' invention as defined by new Claims 29-34 differs from both cited documents by requiring n''' to be 1 to 8 and, thus, provides tetracyclic or higher polycyclic epoxies. In contrast, the cited documents are concerned with comparing 2,3-epoxy norbornene monomers and polymers prepared therefrom with epoxy cyclohexane monomers and polymers. Thus, the compounds set forth in Crivello and LeCamp lie outside the scope of present Claims 29-34. Further, there is no suggestion in either document that higher polycyclic epoxies would

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provide the hydrophobicity, high Tg values, low volatility, and the like that are provided by the compounds defined by present Claims 29-34. Applicants, therefore, submit that present Claims 29-34 are patentable over LeCamp and Crivello. Accordingly, reconsideration and withdrawal of the rejections of Claims 8-10, 12, and 13 under 35 U.S.C. § 102(b) and 35 U.S.C. § 103(a) are respectfully requested.

The rejections of Claims 8 and 12, under 35 U.S.C. § 102(b), as allegedly being anticipated by or, in the alternative, under § 103(a) as allegedly being obvious over Marcus (U.S. Patent No. 3,455,966) are respectfully traversed. The Office Action states that the diepoxides of Claim 1 of Marcus has "applicants' formula (XIV) at one end and an epoxy at the other. Note that the rings can be alkyl substituted (col. 2, line 3)." Office Action, page 4. Applicants respectfully submit that the rejections of Claims 8 and 12 are rendered moot by the amendment to Claim 8 deleting structure (XIV). New Claims 23-28 distinguish over Marcus by requiring that Y be selected from a siloxane or aromatic groups. Thus, the diepoxides of Marcus clearly lie outside the scope of present Claims 23-29. Further, it is respectfully submitted that the alkyl spacer groups of Marcus cannot conceivably suggest the Y groups (i.e., siloxane and aromatic groups) required by the present claims. Accordingly, Applicants respectfully submit that Claims 23-29 are patentable over Marcus and request withdrawal of the rejections of Claims 8 and 12 under 35 U.S.C. § 102(b) or, in the alternative, under 35 U.S.C. § 103(a) on this ground.

The rejections of Claims 8, 12, and 13 under 35 U.S.C. § 102(b) as allegedly being anticipated by or, in the alternative, under § 103(a) as allegedly being obvious over Rick (U.S. Patent No. 3,646,113) are respectfully traversed. The Office Action states "Rick exemplifies (#15) a compound having a methacrylate group and a group corresponding to Applicants' formula XVII." Office Action, page 4. Claim 8 has been amended to delete formula XVII. Thus, Applicants' invention as defined by new Claims 29-34 distinguishes over Rick by requiring that n''' is 1 up to about 8 and, thus, provides tetracyclic and higher polycyclic

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epoxides. In contrast, Rick discloses only bicyclic containing epoxides and contains no hint suggesting that the use of higher polycyclic epoxides might be beneficial. Thus, Applicants submit that Claims 29-34 are patentable over Rick. Accordingly, reconsideration and withdrawal of the rejection of Claims 8, 12, and 13 on these grounds are requested.

The rejections of Claims 8 and 12 under 35 U.S.C. § 102(b) as allegedly being anticipated by or, in the alternative, under § 103(a) as allegedly being obvious over McConnell (U.S. Patent No. 3,297,724) or Starcher (U.S. Patent No. 3,404,102) are respectfully traversed. The Office Action states that McConnell and Starcher each disclose diepoxides "having Applicants' formula XX at one end." Office Action, page 5. Applicants respectfully submit that this rejection has been rendered moot by the deletion of structure (XX) from Claim 8. New Claims 23-28 distinguish over McConnell and Starcher by requiring that Y is a siloxane or aromatic group. Thus, the compounds set forth by McConnell and Starcher are clearly outside the scope of present Claims 23-29. In addition, the alkyl and alkyloxy spacers of McConnell and Starcher do not fairly suggest the Y groups (i.e., siloxanes or aromatic groups) required by the present claims. Thus, it is respectfully submitted that Claims 23-29 are patentable over McConnell and Starcher. Reconsideration and withdrawal of the rejection of Claims 8 and 12 under 35 U.S.C. § 102(b) or, in the alternative, under 35 U.S.C. § 103(a) on this ground are respectfully requested.

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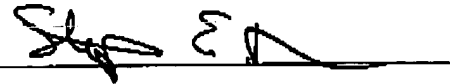
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In view of the above amendments and remarks, reconsideration and favorable action on all claims are respectfully requested. If any issues remain to be resolved in view of this response, the Examiner is invited to contact the undersigned at the telephone number set forth below so that a prompt disposition of this application can be achieved.

Respectfully submitted,

Date: June 4, 2003

By



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